Training for Careers in Biomedical Research

at the National Institutes of Health

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U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

Public Health Service

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NIH Medical Staff Fellowship Program

Physicians and dentists embarking on biomedical research careers can participate in a unique graduate training program at the National Institutes of Health (NIH). The Medical Staff Fellowship Program accepts about 125 highly qualified individuals each year for 2- or 3-year appointments. Medical staff fellows work with senior investigators in clinical or basic research in the Warren Grant Magnuson Clinical Center, a 500-bed research hospital located on the NIH campus in Bethesda, Maryland.

The Medical Staff Fellowship Program offers appointments in clinical and laboratory research and in specialized areas such as dentistry and pharmacology. Depending on the type of appointment, medical staff fellows may provide patient care and participate in clinical and laboratory research under the direction of a senior member of the staff. Other medical staff fellows devote most of their time to laboratory research in a biomedical science. The medical staff fellow is generally trained in a broad range of research procedures and guided towards independent investigation.

Dental staff fellows may participate in laboratory and clinical research and enhance professional skills by treating Clinical Center medical and dental patients in the Dental Clinic of the National Institute of Dental Research.

Medical staff fellows in the National Institute of General Medical Sciences' pharmacology training program are involved in laboratory research and receive intensive training in any of several disciplines related to pharmacology.

Minimum eligibility requirements for most medical staff fellowships is completion of 2 years of postdoctoral training before entrance on duty.

Application should be made 1 or preferably 2 years before desired date of appointment. Appointments are made through the Public Health Service and include highly competitive salary and fringe benefits.

Fully approved residency programs are offered in anatomical pathology, nuclear medicine, allergy and immunology, and transfusion medicine as are fellowships for advanced subspecialty training in transfusion medicine and clinical pathology, including clinical chemistry, immunology, hematology, and microbiology, and the laboratory computer service. Credit towards board certification is available in the following specialties and subspecialties:

- Allergy
- Clinical chemistry
- Critical care medicine
- Dermatology
- Endocrinology
- Hematology
- Gastroenterology
- Infectious diseases
- Internal medicine (NHLBI only)
- Medical genetics
- Medical oncology
- Microbiology
- Neurology
- Pediatric endocrinology
- Pediatric genetics
- Pediatric hematology/oncology
- Pediatrics
- Psychiatry
- Reproductive endocrinology
- Rheumatology
- Transfusion medicine (blood banking and immunohematology)

Medical staff fellowship programs are offered off the Bethesda campus as well. At the National Institute on Aging's Gerontology Research Center in Baltimore, medical staff fellows may participate in clinical programs at the Baltimore City Hospitals and nearby Johns Hopkins Hos-

pital. Fellows in the Interinstitute Medical Genetics Program may attend genetics clinics at collaborating institutions including the Children's Hospital National Medical Center and George Washington University Hospital in Washington, D.C. and the Johns Hopkins Hospital in Baltimore. The Clinical Oncology Program of the National Cancer Institute includes a Medical Oncology Branch at the Naval Hospital in Bethesda, Maryland.

NIH Clinical Electives Program

The National Institutes of Health conducts a program of elective courses open to students from any of the U.S. medical and dental schools. For 1990-91, the staffs of several institutes are collaborating to supply an in-depth exposure to 16 clinical subspecialties: alcoholism, anesthesiology, clinical dental care (dental students), computers in clinical medicine, critical care medicine, endocrinology and metabolism, geriatrics and age-related disease, hematology-oncology, immunology, medical genetics, medical-surgical neurology, nuclear medicine, pain and neurobiology (medical and dental students), pediatric psychopharmacology, psychiatry/psychopharmacology, and surgical oncology. The essence of this educational experience is a close association between the student, medical staff fellows and physicians/scientists in several of the institutes. Patients admitted to NIH's Warren Grant Magnuson Clinical Center are of a special nature because they are selected to meet the criteria of specific research protocols. Therefore, work-ups may be much more detailed, and exposure of medical staff to individual patients may be much more prolonged than in the usual teaching hospital.

Students will have patients assigned to them for work-up, discussion, and participation in the pertinent studies. Special rounds and conferences will be held with students. Also, students will be encouraged to take part in all regular clinical and research conferences and journal clubs.

It has also been traditional at NIH for certain selected students to arrange for tutorials in the biological sciences in some of the NIH research laboratories. These tutorials emphasize the investigative approach to medical problems; exposure to clinical activities, such as bedside and grand rounds, are secondary. The tutorials are arranged and scheduled through communications between the Clinical Electives Program and a faculty sponsor of the student.

Summer Research Fellowship Program

The National Institutes of Health conducts a Summer Research Fellowship Program open to students of any of the U.S. medical and dental schools.

With the guidance of preceptors from the institutes, students conduct research in selected areas of laboratory investigation. The program's objective is to expose students to research procedures in a unique environment devoted exclusively to biomedical research and training. Students participate in research projects and attend lectures and seminars to enhance their education and develop investigative skills.

The program runs a minimum of ten weeks, usually from early June to the end of August; some flexibility in scheduling permits consideration of individual student needs.

Research opportunities are available in the following institutes: Cancer; Eye; Heart, Lung, and Blood; Allergy and

Infectious Diseases; Diabetes and Digestive and Kidney Diseases; Arthritis and Musculoskeletal and Skin Diseases; Dental Research; Mental Health; Aging; Alcohol Abuse and Alcoholism; Child Health and Human Development; and Neurological Disorders and Stroke.

Resources

NIH, the largest biomedical research organization in the world, is located on a 300-acre campus in Bethesda, Maryland. Many scientists of exceptional stature, including three Nobel laureates, work in the institutes that conduct basic and clinical research activities in the Clinical Center.

Senior investigators take great interest in young scientists and view the training of medical staff fellows as an essential component of institute programs.

The Warren Grant Magnuson Clinical Center provides a setting in which a physician in training can participate in medical care, acquire new clinical skills, and carry out investigations in a laboratory just across the corridor from patient rooms. Some of the most advanced bioinstrumentation in this country is provided to aid diagnosis and enhance patient care.

The Clinical Center has approximately 1,800 laboratories for cooperative investigations among clinicians and basic scientists. The Nuclear Medicine Department provides a broad range of diagnostic services including whole-body scanning and diagnostic imaging through the use of radioactive pharmaceuticals. Positron emission tomography and radionuclide cineangiography are among the imaging techniques under study. The Clinical Pathology laboratories are superbly equipped to run chemical diagnostic tests for Clinical Center patients. The develop-

ment of radioimmunoassays, adaption of the calorimeter for laboratory tests, electrophoresis, instrument evaluation, and automated assay are currently of interest.

A large surgical wing is available for open-heart and neurological surgery. The Computerized Medical Information System (MIS) offers opportunities for research in computer techniques, in addition to providing communication, storage and retrieval capabilities for the hospital.

About 8,800 patients are admitted each year to the Clinical Center. Each patient is selected because his illness is relevant to a clinical research program. In addition, about 12 percent of Clinical Center inpatients are healthy volunteers who serve as subjects for study of normal physiology and metabolism.

Over 145,000 outpatient visits are serviced in the clinic each year. The 13-story clinic, adjacent to the hospital holds 230 laboratories to the 1,300 already existing in the hospital.

The Clinical Center also houses a large medical library, and the National Library of Medicine, which boasts the world's largest collection of medical publications, is a short walk from the hospital. MEDLARS/MEDLINE services provide rapid and comprehensive literature searches.

A Division of Computer Research and Technology applies techniques of mathematics, statistics, and computer science to medical problems and analyzes biological phenomena in terms of theoretical physics and chemistry.

APPROXIMATE VOLUMES

Educational Opportunities

A graduate program of over 100 evening courses at NIH provides advanced study in the biomedical fields, mathematics, behavioral and social sciences, languages, general studies, and medical subspecialty review.

Tutorial seminars and discussion groups in certain rapidly evolving biomedical fields provide a forum where investigators from a variety of disciplines exchange perspectives on common problems. Medical staff fellows also have an opportunity to interact with medical students in the Clinical Electives Program.

About 30 scheduled clinical conferences and rounds, open to all staff members, are held every week. Combined clinical staff conferences promote the exchange of scientific information among the institutes.

Journal clubs meet regularly, and each week 6 to 10 special lectures are presented by visiting scientists from this country and abroad.

Seven nearby medical centers—the Uniformed Services University of the Health Sciences at the Naval Hospital Bethesda, Walter Reed Army Medical Center, Georgetown Medical School, University of Maryland Medical School, Johns Hopkins Medical School, and Howard Medical School—offer additional learning and teaching opportunities. Cooperative programs are available in which medical staff fellows rotate to other hospitals in the area, as well as the Clinical Center.

The Washington Community

Metropolitan Washington abounds in recreational and cultural opportunities. The Kennedy Center for the Performing Arts offers the National Symphony Orchestra, ballet, opera, and drama. During the summer, musical and theatrical events are held at Wolf Trap Farm Park, a pleasant outdoor theater, surrounded by a 117-acre park. Professional sports events, including hockey, football, soccer, and basketball are held year-round. The Potomac River offers canoeing, kayaking, and boating; a network of hiking trails along the river and Rock Creek Park attracts the serious hiker or jogger. The area is ½ hour from the Chesapeake Bay and about a 2-hour drive to the ocean beaches or to the Blue Ridge mountains and the Appalachian Trail.

Housing in the immediate vicinity or within easy cycling distance of NIH is readily available.

The National Institutes of Health does not discriminate in employment on grounds of sex, race, color, age, religion, handicap, or national origin.

For further information about the NIH Medical Staff Fellowship Program, Clinical Electives Program, or the Summer Research Fellowship Program, please complete and return the attached postcard. Telephone inquiries are welcomed. Place a call to the Medical Staff Fellowship Office at (301) 496-2427.

Clinical Center Communications

NIH Publication No. 89-758
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Please send me the following:

☐ The NIH Medical Staff Fellowship Program Application (for physicians and dentists)

☐ The NIH Medical Staff Fellowship Program Catalog only (for physicians and dentists)
Available Aug. 1989

☐ The NIH Clinical Electives Program Catalog (for medical, dental, and osteopathic students)
Available Nov. 1989

☐ The Summer Research Fellowship Program Catalog (for medical and dental students)
Available Nov. 1989

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Current year in school: _____

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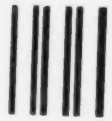

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